

YO998426DIV

REMARKS

Claims 18-23, 25-35, 37, and 38 are all the claims pending in the application. Claim 36 has been cancelled as being redundant and claims 37 and 38 have been added to further define the invention. Claim 35 stands rejected upon informalities. Claims 18-21, 23, 30-33, and 35 stand rejected on prior art grounds. Applicants respectfully traverse these objections/rejections based on the following discussion.

I. The 35 U.S.C. §112, Second Paragraph, Rejection

Claim 35 stands rejected under 35 U.S.C. §112, second paragraph. Claim 35 has been amended to provide antecedent basis for the lower insulator layer. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

II. The Prior Art Rejections

Claims 18-21, 23, 30-33, and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Taur et al. (US 5,646,058) in view of Goto (JP 05-226655). Applicants respectfully traverse these rejections based on the following discussion.

A. The Rejection Based on Taur in view of Goto

Applicants respectfully submit that independent claims 18 and 30 are patentable over the combination of Taur and Goto because neither reference teaches or suggests a structure that includes spacers (e.g., item 21 in Applicants' Figure 1D) between the gate conductor and the source and drain regions. Therefore, as explained in detail below, Applicants submit that independent claims 18 and 30 and their associated dependent claims are patentable over the prior art of record.

More specifically, Taur does not teach upper and lower spacers between the gate conductor and the source and drain regions. In fact Taur uses the gate oxide 26 (Fig 2 in

YO998426DIV

Taur) for isolating the gate conductor from the source and drain. Thus, the gate oxide 26 thickness is linked to the thickness of the isolation layer (also 26) between the gate conductor and the source and drain. Goto teaches the same isolation as Taur: "After formation of a thermal oxide film 18 on the surfaces of the silicon layer and the polysilicon source and drain electrodes ..." (See Goto's abstract, and Fig d therein). That is, in Goto the isolation of the source and drain from the gate conductor is obtained by growing a gate oxide 18 also over the silicon source and drain regions. The claimed invention, on the other hand, forms a dielectric spacer 21 to isolate the gate conductor sidewall from the source and drain (Fig. 1D). The spacer thickness is independent of the gate oxide which is grown at a different step than that of the spacer. Moreover, the gate dielectric and the spacer 21 can be of different materials (see new claim 38).

Applicants respectfully submit that the Office Action does not identify correctly what is meant by an upper and a lower passivation layers. This is seen where the Office Action refers to layer 4 in Taur as the lower insulating layer, and layer 20 in Goto as the upper insulating layer. These layers are not spacers.

Therefore, it is Applicants' position that prior art of record does not teach or suggest a structure that includes spacers between the gate conductor and the source and drain regions, as defined by independent claims 18 and 30. More specifically, independent claim 18 defines "an upper spacer between said double-gate conductor and said drain and source regions; and a lower spacer between said double-gate conductor and said drain and source regions"; and independent claim 30 defines "a spacer between said double-gate conductor and said drain and source regions." Thus, Applicants respectfully submit that independent claims 18 and 30 are patentable over the prior art of record. Further, dependent claims 19-21, 23, and 31-35 are similarly patentable, not only by virtue of their dependency from a patentable independent claim, but also by virtue of the additional features of the invention they define. In view the forgoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

YO998426DIV

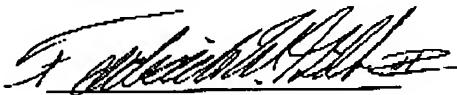
III. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 18-23, 25-35, 37, and 38 all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 50-0510.

Respectfully submitted,



Frederick W. Gibb, III
Reg. No. 37,629

RECEIVED
CENTRAL FAX CENTER

SEP 25 2003

Date: 9/23/03
McGinn & Gibb, PLLC
2568-A Riva Road, Suite 304
Annapolis, Maryland 21401
(301) 261-8071
Customer No. 28211

OFFICIAL